

A Note on *Dhammapada* 60 and the Length of the *Yojana*

I. *Dhammapada* 60 and its counterparts

Dhammapada 60 is the first verse of the *Bāla-vagga*, “The Chapter on Fools”. It may be rendered as follows:

Long is the night for one who is sleepless;
long is the league for one who is weary.
Long is saṃsāra for the fool
who does not understand the Good Dhamma.

In the Pāli and Patna *Dhammapadas* the verse is in the *Bālavagga*; in the *Udānavarga* it is in the *Anityavarga*.¹ The first part of the *Anityavarga* of the *Udānavarga* from Subaśi, which should have contained the verse, is lost,² as is the entire *Bālavarga* of the “*Gāndhārī Dharmapada*”, which might have contained the verse.³ A perfect equivalent to the *Udānavarga* verse is cited in the *Mahākarmavibhaṅga* as “a *gāthā* spoken by the Lord”,⁴ and lines *c* and *d* are cited in Bhavya’s *Tarkajvālā*, as preserved in Tibetan translation.

¹ The verse is not included in the *Fa chü p’i yü ching* (Taishō 211): see Samuel Beal, *Texts from the Buddhist Canon, Commonly known as Dhammapada, with accompanying Narratives*, [Boston, 1878] San Francisco, 1977, p. 77, and Charles Willemen, *Dharmapada: A Concordance to Udānavarga, Dharmapada, and the Chinese Dharmapada Literature*, Brussels, 1974, p. 10.

² Cf. H. Nakatani (ed.), *Udānavarga de Subaśi*, Paris, 1987, p. 13.

³ Cf. John Brough, *The Gāndhārī Dharmapada*, London, 1962, pp. 10–12.

⁴ *bhagavatā gāthā bhāṣitā*: Sylvain Lévi, *Mahākarmavibhaṅga (La grande classification des actes) et Karmavibhaṅgopadeśa (Discussion sur le Mahā Karmavibhaṅga)*, Paris, 1932, p. 46.4; P.L. Vaidya, *Mahāyāna-sūtra-saṃgraha* I (Buddhist Sanskrit Texts 17), Darbhanga, 1961, p. 187.9.

Dhp 60 (V,1)	PDhp 185 (XI,12b)	Uv I,19; Mkv 46.4
<i>dīghā jāgarato rattī</i>	<i>drīghā assupato rātrī</i>	<i>dīrghā jāgarato rātrir</i>
<i>dīgham santassa</i> <i>yojanam</i>	<i>drīgham śāntassa</i> <i>yojanam</i>	<i>dīrgham śrāntasya</i> <i>yojanam</i>
<i>dīgho bālānam</i> <i>samsāro</i>	<i>drīgho bālāna samsāro</i>	<i>dīrgho bālasya</i> <i>samsārah</i>
<i>saddhammam</i> <i>avijānatam.</i>	<i>saddhammam</i> <i>avijānatām.</i> ⁵	<i>saddharmam</i> <i>avijānatah.</i> ⁶

UvT I,19

Mkv 189.8

<i>mel tshe byed la mtshan mo rin//</i>	<i>mel tshe byed na nam yañ rin//</i>
<i>lam gyis dub la rgyaṅ grags rin//</i>	<i>nal ba dag la dpag tshad rin//</i>
<i>dam chos rnam par mi śes pa'i//</i>	<i>dam pa'i chos na śes gyur kyañ//</i>
<i>byis pa rnams la 'khor ba rin//</i> ⁷	<i>byis pa rnams la 'khor ba rin//</i> ⁸

⁵ Margaret Cone, "Patna Dharmapada", *JPTS* XIII (1989), p. 185; Gustav Roth, "Text of the Patna Dharmapada", in Heinz Bechert (ed.), *The Language of the Earliest Buddhist Tradition*, Göttingen, 1980, p. 114. I prefer "Patna *Dhamma*-pada" to "Patna *Dharma*-pada", since *dhamma* is so spelt in the body of the text: *Dharmmapada* occurs only in the Sanskrit colophon. I have proposed elsewhere that the PDhp might be a recension of the Sāmnatiya school: see Peter Skilling, "Theravādin Literature in Tibetan Translation", *JPTS* XIX (1993), p. 152, n. 1.

⁶ Franz Bernhard (ed.), *Udānavarga*, Vol. I, Göttingen, 1965, p. 102.

⁷ Siglinde Dietz and Champa Thupten Zongtse, *Udānavarga*, Vol. III, Göttingen, 1990, p. 34.

⁸ Lévi's text is based on the Narthang blockprint, compared with the Peking (p. 183, n. 1). I assume that Narthang reads *na*, as given by Lévi. Peking reads here *nī* (Q1005, Vol. 39, *mdo šu*, 291b2). The reading should rather be the negative *mi*.

Tarkajvālā 167.28

*dam chos rnam par mi śes pa'i// byis pa la ni 'khor ba rin//*⁹

Chinese *Udānavarga* I,18

To him who does not sleep soundly the night seems long. To him who is tired the road seems long. For the fool birth and death are longlasting. Few hear the good law.¹⁰

Both the Pāli and Patna *Dhammapadas* give *bāla* in the plural, as does the Tibetan of the *Udānavarga* and the *Mahākarmavibhaṅga* (in both *byis pa rnams*). The Sanskrit *Udānavarga* (and the Chinese *Udānavarga* in English translation), the Sanskrit *Mahākarmavibhaṅga*, and the Tibetan *Tarkajvālā* citation give *bāla* in the singular. The Tibetan *Udānavarga* has *rgyaṅ grags* = *krośa* in place of *yojana*; this is probably a slip of the translators. The *Udānavargavivaraṇa* and the Tibetan *Mahākarma-vibhaṅga* have *dpag tshad* = *yojana*.

II. The setting (*nidāna*) of the verse

Prajñāvarman, in his *Udānavargavivaraṇa*, gives three *nidānas* for the *Udānavarga* verse:¹¹

⁹ Shotaro Iida, *Reason and Emptiness: A Study in Logic and Mysticism*, Tokyo, 1980, p. 167.28.

¹⁰ Taishō 213, tr. by Charles Willemen, *The Chinese Udānavarga: A Collection of Important Odes of the Law, Fa Chi Yao Sung Ching* (Mélanges chinois et bouddhiques XIX), Brussels, 1978, p. 2.

¹¹ UvViv I 98.15–99.10. For the alternate *nidānas* given by Prajñāvarman, see Michael Balk, *Untersuchungen zum Udānavarga*, Bonn, 1988, pp. 205–12 and Skilling, "Theravādin Literature", pp. 143–53.

(1) When the monks were gathered, seated together in the assembly hall (*bsti gnas kyi khañ pa*),¹² this chance discussion arose: “What, venerable ones, is that which is called ‘long’ (*dirgha*)?” Some said, “The night is long for one who is awake”. Others said, “The *yojana* is long for the weary traveller”. Overhearing [their discussion], the Lord spoke this verse.

(2) According to others: A deity (*deva*) came and asked the Lord:

“What is long for one who is awake?

What is long for the weary traveller?

¹² Cf. the stock introduction at *Śayanāsanavastu* (Raniero Gnoli, *The Gilgit Manuscript of the Śayanāsanavastu and the Adhikarānavastu*, Rome, 1978, p. 3.9 *sambahulānām bhikkhūnām upasthānaśālāyām samñiṣannānām samnipatitānām ayam evamrūpo 'bhūḍ antarākathāsamudāhārah; Kośavyākhyā* (ed. Swami Dwarikadas Shastri, IV 1066, antepenult); introductions to MN 119 and 123 (III 88.18, 118.12) *sambahulānām bhikkhūnām...upatthānaśālāyām sannisinnānām sannipatitānām ayam antarākathā udapādi; Karmaprajñapti, Upāyikā-tikā* (see below). It seems that here *bsti gnas kyi khañ pa* = *upasthānaśālā* (Pāli *upatthānaśālā*): *bsti stan* frequently translates forms of *sat-kṛ*, which is one of the senses of *upasthāna*. *upasthānaśālā* is frequently rendered as *rim gro'i gnas*, the form sanctioned by the *Mahāvīyutpatti* (Mvy 5565; MPS 2.1–4; *Vinayavastu, Saṃghabhedavastu*, Q1030, Vol. 42, 'dul ba ce, 155b7, 156a1, 2 = Raniero Gnoli (ed.), *The Gilgit Manuscript of the Saṃghabhedavastu*, Part II, Rome, 1978, p. 75.25 foll.). But there are, for Tibetan, a surprising number of alternates:

rim 'gro'i khañ pa (*Karmaprajñapti*, Q5589, Vol. 115, *mñon pa khu*, 112a3);

dpoñ sa'i khañ pa (*Vinayavibhaṅga*, Q1032, Vol. 42, 'dul ba je, 1a3, 5, 7, 8 = *Saṃghabhedavastu*, loc. cit.);

bkad sa (MPS 19.1, 2, 4, 5; at Mvy 5562 *bkad sa* = *maṇḍapa*);

'*dun khañ* (*Kośavyākhyā*, Q5593, Vol. 117, *mñon pa chu*, 303b7);

mdun ma (*Śamathadeva, Abhidharmakośopāyikā-tikā*, Q5595, Vol. 118, *mñon pa thu*, 58b6, 59a4);

bsñen bkur gyi gnas (*Śayanāsanavastu*, Q1030, Vol. 41, 'dul ba ñe, 179a5, b5 (*dkur* for *bkur*)).

What is long for the fool?

I beg your answer to these riddles.”

The Lord replied, “Night is long for the wide-awake”, and so on.

(3) Others say that this verse was spoken [by the Lord] with reference to (*ārabhya*) the sleepless King Prasenajit and a weary traveller.

The first *nidāna*, which I will call the “official” one—the *nidāna* transmitted by Prajñāvarman’s school, the (Mūla)Sarvāstivādin—is a summarized version of a stock opening employed in both (Mūla)Sarvāstivādin and Theravādin sūtra literature. The *nidāna* might therefore be drawn from a canonical text. The second *nidāna*, attributed to “others” (*gzan dag* = *anye*)—that is, another school—may also be canonical, since it resembles the short sūtras in which a deity or other figure approaches the Buddha and asks a riddle in verse, to which the Buddha replies in verse. Such sūtras are common in the *Deva-* and *Devatā-samyuttas* of the *Sagātha-vagga* of the *Samyutta-nikāya*, although no counterpart to Prajñāvarman’s citation is found there or elsewhere in Pāli. The third *nidāna*, also attributed to “others”, resembles the short *nidānas* given at the head of the stories in the *Dhammapada-atthakathā*. For the present verse that text gives the following *nidāna*:¹³

*imaṃ dhammadesanaṃ satthā jetavane viharanto
pasenadikosalañ c' eva aññatarañ ca purisaṃ ārabha kathesi.*

The Teacher gave this religious instruction when he was staying in the Jetavana, with reference to [King] Pasenadi of Kosala and a certain man.

¹³ *Dhammapada-atthakathā, Aññatarapurisa-vatthu*, (Mm) III 100.3; (PTS) II 1.3.

The *Dhammapada-aṭṭhakathā* gives a long story¹⁴ in which King Pasenadi of Kosala, out touring the city, glimpses the wife of “a certain poor man”,¹⁵ becomes infatuated with her, and spends a sleepless night.¹⁶ The reference to “the sleepless King Prasenajit” of the UvViv fits the *Dhammapada-aṭṭhakathā* story, but the “weary traveller” does not, since the “certain poor man” of the latter is a resident of the city, and is taken by the King into his service (with a sinister motive). Nonetheless, Prajñāvarman’s reference suggests that, as in other cases, he knew an exegetical tradition on the *Udānavarga/Dharmapada* that was related to that of the Theravādins.

III. The length of the yojana

The *Dhammapada-aṭṭhakathā*, commenting on the line “long is the league to him that is weary” (*dīgham santassa yojanam*), defines a *yojana* as equal to four *gāvuta*: *yojanan ti yojanam pi catuggāvutamattam eva*.¹⁷ The *Vibhaṅga-aṭṭhakathā* states that 80 *usabha* are a *gāvuta*, and four *gāvuta* a *yojana*: *asīti usabhāni gāvutam, cattāri gāvutāni yojanam*.¹⁸ The *Abhidhānappadīpikā* adds one more measurement:

¹⁴ (PTS) II 1–19; (Mm) III 100–114; Eugene Watson Burlingame (tr.), *Buddhist Legends*, Part 2 ([1921] London 1979), Part 2, pp. 100–111.

¹⁵ (Mm) III 100.9; (PTS) II 1.12 *aññatarassāpi* (PTS *aññatarassāpi*) *duggatapurisassa bhariyā*.

¹⁶ (PTS) II 5.10, *rañño pi tam rattim niddam alabhantassa*; 5.20, *rājā niddam alabhanto*.

¹⁷ (Mm) III 109.20; (PTS) II 13.4.

¹⁸ *Sammohavinodanī nāma Vibhaṅgaṭṭhakathā*, Nālandā ed. p. 346.19 = PTS ed. p. 343.

*gāvutam usabhāsīti yojanam catuggāvutam
dhanupañcasatam koso*.¹⁹

A *gāvuta* is 80 *usabha*, a *yojana* four *gāvuta*;
a *kosa* is 500 *dhanu*.

The Pāli Text Society’s Dictionary (p. 250a) defines *gāvuta* as “a linear measure, a quarter of a *yojana* = 80 *usabhas*, a little less than two miles, a league”. For *yojana* (p. 559a) it has “a measure of length: as much as can be travelled with *one* yoke (of oxen), a distance of about 7 miles, which is given by Buddhaghosa as equal to 4 *gāvutas*”, referring to the *Dhammapada-aṭṭhakathā* definition given above. It does not give *kosa* (p. 230ab) or *dhanu* (p. 335a) in the sense of measurements.

Medhamkara’s *Lokadīpakasāra* gives the relation between *kosa* and *gāvuti*.²⁰

*dhanu pañcasatam kosam kosam cattāri gāvutam
gāvutāni ca cattāri yojanan ti pavuccatīti*.
500 *dhanu* are a *kosa*, four *kosa* are a *gāvuta*;
four *gāvuta* are called a *yojana*.

¹⁹ *Phra gambhīr abhidhānappadīpikā ru bacanānukram bhaṣāpālī plae pen thai* (Mahāmakūṭarājavidyālaya, Bangkok, 2508 [1965]), p. 53, vv. 196cd, 197a.

²⁰ National Library-Fine Arts Department, *Lokadīpakasāra*, Bangkok, 2529 [1986], Chap. 7, p. 544.18.

A similar verse is found in the *Samkhyāpakāsaka-pakaraṇa*²¹ and *Cakkavāḍadīpanī*.²²

*dhanu pañcasatam kosam catukosañ ca gāvutaṃ
gāvutāni pi cattāri yojanan ti pavuccati.*

The same figures are given by Daśabalaśrimitra in Chapter 5 of his *Samskṛtāsamskṛta-viniścaya*, “Analysis of Matter and Time” (**Rūpa-kāla-viniścaya*).²³ The chapter gives a brief account of the components of atoms (*paramāṇu*) and of measurements of size from the atom up to the *yojana*, according to the Vaibhāṣikas. To this the author appends three lines of verse “from the tradition (*āgama*) of the Ārya Sthavira *nikāya*”:

*gzu 'dom lña brgya rgyaṅ grags te// rgyaṅ grags bži la ba laṅ
'gros//
ba laṅ 'gros bži dpag tshad do// zes so//*

²¹ Boonna Sonchai, *Samkhyāpakāsakaparaṇam and Commentary: An Edition and Critical Study*, Thesis submitted in Partial Fulfillment of the Requirements for the Degree of Master of Arts, Department of Eastern Languages, Graduate School, Chulalongkorn University, 1980, Chap. I, *Addhā-samkhyā*, v. 8 (p. 40). For this text see *Abstracts of M.A. Pāli-Sanskrit Theses* (Pāli and Sanskrit Section, Department of Eastern Languages, Faculty of Arts, Chulalongkorn University 2531), pp. 39 (Thai) and 123 (English) and Supaphan na Bangchang, *Vivadhānākār varnagaṭṭi sai phra suttantapīṭak ti daeng nai pradeś thai*, Bangkok, 2533 [1990], pp. 325–33.

²² National Library-Fine Arts Department, *Cakkavāḍadīpanī*, Bangkok, 2523 [1980], p. 208.7, with the sole variant *ca* for *pi* in line *c* (= *Lokadīpakasāra*). The *Cakkavāḍadīpanī* is citing the *Lokadīpakasāra*: the source is given at the beginning of the section (202.11, *vuttam lokadīpakasāre*) after which Sirimaṅgala introduces his citations with *vuttam tatth' eva*. For this text see Supaphan, *op. cit.*, 405–18.

²³ For Daśabala and his *Samskṛtāsamskṛta-viniścaya* see Peter Skilling, “The *Samskṛtāsamskṛta-viniścaya* of Daśabalaśrimitra”, *Buddhist Studies Review* 4/1 (1987), pp. 3–23.

500 *dhanu* are one *kosa*; four *kosa* are one *gāvuta*;
four *gāvuta* are one *yojana*.

Although the measurements are the same, the citation does not exactly correspond to any of our sources, since it gives all three measures in three lines. It is closest to the *Lokadīpakasāra* and *Samkhyāpakāsaka* versions. Medhamkara wrote the former at Muttamanagara (Martaban) in Rāmaññadesa in the 14th century. Nāṇavilāsa, author of the latter, was probably a Northern Thai monk from Chiang Saen of the late 15th to early 16th century,²⁴ while Sirimaṅgala (a student of the preceding, who wrote a commentary on the *Samkhyāpakāsaka*) compiled the *Cakkavāḍadīpanī* in the kingdom of Lanna (Chiang Mai) in BE 2063 (CE 1520).²⁵ Since Daśabalaśrimitra probably lived in the 12th or 13th century, his citation is the earliest known source that includes the equation 4 *kosa* = 1 *gāvuta*.²⁶ The equation is not found in the *Abhidhānappadīpikā*, composed by Moggallāna in the Jetavana Monastery at Pulatthipura towards the end of the 12th century.²⁷

Non-Theravādin sources give different definitions. Prajñāvarman's *Udānavarga-vivaraṇa* has: “in this case a *yojana* equals a distance of four *krośa*” (*dpag tshad ni 'dir rgyaṅ grags bži'i lam mo*).²⁸ The same figure is given in the *Śārdūlakarṇāvadāna* and the

²⁴ Supaphan, *op. cit.*, pp. 325–26.

²⁵ Supaphan, *op. cit.*, p. 405.

²⁶ I would not be astonished if more on measurements, including perhaps the figure in question, occurs in the *Ṭikā* literature.

²⁷ For the date see K.R. Norman, *Pāli Literature* (Jan Gonda [ed.], *A History of Indian Literature*, Vol. VII, Fasc. 2), Wiesbaden, 1983, pp. 166–67; Claus Vogel, *Indian Lexicography*, (Jan Gonda [ed.], *A History of Indian Literature*, Vol. V, Fasc. 4), Wiesbaden, 1979, p. 313; Jinadasa Liyanaratne, “South Asian flora as reflected in the twelfth-century Pāli lexicon *Abhidhānappadīpikā*”, *JPTS* XX (1994), p. 43.

²⁸ I 100.5.

Lalitavistara; the former refers to a “Magadhan *yojana*”, the latter to a “Magadhan *krośa*”.²⁹ In both texts 1000 *dhanu* = 1 *krośa*. The Vaibhāṣika definition given by Daśabalaśrimitra (D 119b5, Q 18a3) is “500 *dhanu* are one *krośa*; eight *krośa* are one *yojana*”. This agrees with the *Abhidharmakośa* (III,87cd, 88a).³⁰ (Yaśomitra does not add any comments.)³¹ Hsüan-tsang (second quarter of the 7th century) gives the same figures.³² The Sanskrit-Tibetan lexicon *Mahāvvyutpatti* (beginning of the 9th century) gives only one measurement, *dhanuḥ pañca śatāni krośaḥ*.³³ In sum:

²⁹ E.B. Cowell & R.A. Neil (eds.), *The Divyāvadāna*, repr. Delhi, 1987, p. 645.15 *dhanuḥ sahasraṃ ekakrośaḥ, catvāraḥ krośā eko māgadho yojanaḥ* = Q1027, *sTag rna'i rtogs pa brjod pa*, Vol. 40, *mdo ke*, 264b4 *gzu stoṅ la ni rgyan grags gcig go; rgyan grags bži la ni ma ga dha'i dpag tshad gcig go*; P.L. Vaidya (ed.), *Lalitavistara*, Darbhanga, 1958, p. 104.5 *dhanuḥ sahasraṃ māgadha* (mārgadhvajā, text) *krośaḥ, catvāraḥ krośā yojanam* = Q763, Vol. 27, *mdo ku*, 89b4 *gzu stoṅ la ni yul ma ga dha'i rgyan grags gcigo; rgyan grags bži la ni dpag tshad gcig go*.

³⁰ P. Pradhan (ed.), *Abhidharmakośabhāṣyam of Vasubandhu*, Patna, 1975, 177.4, *pañcaśatāny eṣāṃ krośo 'raṇyaṃ ca tan matam: dhanuṣāṃ pañca śatāni krośaḥ, krośamātraṃ ca grāmādi 'raṇyaṃ iṣṭam, te 'ṣṭau yojanam ity āhuḥ*. See also William Edward Soothill and Lewis Hodous, *A Dictionary of Chinese Buddhist Terms*, [London, 1937] Delhi, 1987: *krośa*, pp. 92b-93a, 261b, 304a, 322a; *yojana*, 197b, and L. Petech, *Northern India according to the Shui-ching-chu*, Rome, 1950, p. 29. For a complete list of measurements, see William Montgomery McGovern, *A Manual of Buddhist Philosophy*, [London, 1923] Lucknow, 1976, pp. 41-43.

³¹ Swami Dwarikadas Shastri (ed.), *Abhidharmakośa & Bhāṣya of Acharya Vasubandhu with Sphuṭārthā Commentary of Ācārya Yaśomitra*, Part II, Varanasi, 1971, p. 536.19.

³² Samuel Beal, *Si-yu-ki. Buddhist Records of the Western World*, London, 1884 (repr. Delhi, 1981) I 70-71; Thomas Watters, *On Yuan Chwang's Travels in India (A.D. 629-645)*, London, 1904-5 (repr. New Delhi, 1973) I 141-43.

³³ Mvy 8205.

500 *dhanu* = 1 *krośa* (Theravāda, Vaibhāṣika, Hsüan-tsang, *Mahāvvyutpatti*);

1000 *dhanu* = 1 *krośa* (*Śārdūlakarṇāvadāna*, *Lalitavistara*);

4 *krośa* = 1 *yojana* (Prajñāvarman, *Śārdūlakarṇāvadāna*, *Lalitavistara*)

8 *krośa* = 1 *yojana* (Vaibhāṣika, Hsüan-tsang)

16 *krośa* = 1 *yojana* (Theravāda).

Monier-Williams defines a *krośa* as “‘the range of the voice in calling or hallooing’, a measure of distance (an Indian league, commonly called a Kos = 1000 Daṇḍas = 4000 Hastas = 1/4 Yojana; according to others = 2000 Daṇḍas = 8000 Hastas = 1/2 Gavyūti).³⁴ He defines a *yojana* as “a stage or Yojana (*i.e.* a distance traversed in one harnessing or without unyoking; esp. a particular measure of distance, sometimes regarded as equal to 4 or 5 English miles, but more correctly = 4 Krośas or about 9 miles; according to other calculations = 2 1/2 English miles, and according to some = 8 Krośas”.³⁵ His sources thus give some of the definitions used by the Buddhists, but as part of different systems of measurement. Evidently, and naturally enough, a number of systems coexisted, and the definition of the *yojana* varied with time, place, tradition, and context.³⁶ It could hardly have been a matter of sectarian dispute for the Buddhists, although it may have had some significance in the interpretation of the Vinaya.³⁷

³⁴ Sir Monier Monier-Williams, *A Sanskrit-English Dictionary*, [Oxford, 1899] Delhi, 1976, p. 322b.

³⁵ *ibid.*, p. 858a.

³⁶ See A.L. Basham, *The Wonder that was India*, [1967] Calcutta, 1971, pp. 505-6.

³⁷ See e.g. *The Entrance to the Vinaya, Vinayamukha*, Vol. I, Bangkok, 2512/1969, pp. 235-36. The *Lokadīpakasāra* (544.7 foll. = *Cakkavāḍadīpanī* 207.21 foll.) mentions two types of *yojana*: *brahmādi-yojana* and *bhūmyādi-yojana*. The first, used for cosmic measurements such as the size of the moon,

In Section IV I give a translation, in Section V the Tibetan text, of Chapter 5 of the *Samskṛtāsamskṛta-viniścaya*. Daśabalaśrimitra's description of atoms agrees with that of the *Indriyanirdeśa* (Chap. 2) of the *Abhidharmakośa*.³⁸ His enumeration of measurements of size and units of time, both given in ascending order, agrees on the whole with that of the *Lokanirdeśa* (Chap. 3) of the *Abhidharmakośa*.³⁹ The relative antiquity of the enumerations of size and time is shown by the fact that they are given in the *Lokaprajñapti*, a "canonical" text of the (Mūla)Sarvāstivādin Abhidharma.⁴⁰

The *Vibhaṅga-aṭṭhakathā* gives a series of ascending measurements of size, starting from the atom.⁴¹ The same figures are

sun, and *vimānas*, is that of Daśabalaśrimitra's verse. The second, used for the measurement of land, mountains, and physical distance, will be described below.

³⁸ Cf. Louis de La Vallée Poussin, *L'Abhidharmakośa de Vasubandhu*, Tome I, repr. Brussels, 1971, pp. 143–47. Cf. Padmanabh S. Jaini (ed.), *Abhidharmadīpa with Vibhāṣāprabhāvṛtti*, Patna, 1977, (text) pp. 65–66, and Y. Karunadasa, *Buddhist Analysis of Matter*, Colombo, 1967, Chapter 8, "Atomism".

³⁹ See *L'Abhidharmakośa de Vasubandhu*, Tome II, pp. 177–80. I am indebted to La Vallée Poussin's valuable notes. Unfortunately the sections of the third chapter of the *Abhidharmadīpa* and its *Vibhāṣāprabhāvṛtti*, in which the information might have occurred, are lost: see Jaini, p. 115, n. 1.

⁴⁰ Louis de La Vallée Poussin, *Bouddhisme. Études et matériaux. Cosmologie: Le monde des êtres et le monde-réceptacle. — Vasubandhu et Yaśomitra. Troisième chapitre de l'Abhidharmakośa: Kārikā, Bhāṣya et Vyākhyā. Avec une analyse de la Lokaprajñapti et de la Kāraṇaprajñapti de Maudgalyāyana*, in *Académie Royale de Belgique, Classe des Lettres et des Sciences morales et politiques et Classe des Beaux-Arts, Mémoires, deuxième série, tome VI, fasc. II*, Brussels, January, 1919, p. 309. For size see *Lokaprajñapti*, Q5587, Vol. 115, *mñon pa khu* 11a7–b2; for time see 54a4.

⁴¹ *Vibhaṅga-aṭṭhakathā* (Nālandā ed.) 346.5–19 = PTS ed. p. 343; Bhikkhu Nāṇamoli (tr.), *The Dispeller of Delusion (Sammohavinodanī)*, Part II, Oxford, 1991, p. 67.

given in the *Abhidhānappadīpikā*, *Lokadīpakasāra*, *Samkhyāpakāsaka*, and *Cakkavāladīpanī*.⁴²

36 *paramāṇu* = 1 *anu*

36 *anu* = 1 *tajjārī*

36 *tajjārī* = 1 *rathareṇu*

36 *rathareṇu* = 1 *likkhā*

7 *likkhā* = 1 *ūkā*

7 *ūkā* = 1 *dhaññamāsa*

7 *dhaññamāsa* = 1 *aṅgula*

12 *aṅgula* = 1 *vidatthi*

2 *vidatthi* = 1 *ratana*

7 *ratana* = 1 *yaṭṭhi*

20 *yaṭṭhi* = 1 *usabha*

80 *usabha* = 1 *gāvuta*

4 *gāvuta* = 1 *yojana*.

The figures and names are quite different from those of the *Vaibhāṣikas*, with the exception of the equations 7 *likkhā* = 1 *ūkā*; 7 *ūkā* = 1 *dhaññamāsa*; 7 *dhaññamāsa* = 1 *aṅgula*, which may be compared with the 7 *likṣā* = 1 *yūka*; 7 *yūka* = 1 *yava*; 7 *yava* = 1 *aṅgulī-parvan* of the *Vaibhāṣika* system (see below).

The *Abhidhānappadīpikā* does not enumerate the units of time. For these we may turn to Medhamkara's *Lokadīpakasāra*.⁴³

⁴² *Abhidhānappadīpikā* vv. 194–96; *Lokadīpakasāra* p. 544.10–15; *Samkhyāpakāsaka* Ch. 1, vv. 2–5; *Cakkavāladīpanī* 207, penult.–208.4. Cf. Y. Karunadasa, *op. cit.*, pp. 150–51. According to the *Lokadīpakasāra* and *Cakkavāladīpanī* this is the *bhūmyādi-yojana*.

⁴³ *Lokadīpakasāra* 546.1. I quote the verse from the *Cakkavāladīpanī* (see following note) because it appears to be corrupt in the *Lokadīpakasāra*.

*dasakkharā ekaprāṇam chaprāṇaṇ ca vinādikaṃ
vinādī pañcadasa pādaṃ catupādaṇ ca nādikā
saṭṭhi nādī ahorattam timsarattekamāsakam
dvādasamāsakam vassam evaṃ kālam vijāniya.*

10 akkhara are 1 prāṇa;
6 prāṇa are 1 vinādikā;
15 vinādī are 1 pāda;
4 pāda are 1 nādikā;
60 nādī are 1 day-and-night (ahoratta);
30 nights are 1 month (māsa);
12 months are 1 year (vassa).

The verses are cited by Sirimaṅgalācariya in his *Cakkavāladīpanī*, with a prose commentary.⁴⁴ The terms *akkhara*, *prāṇa* (or *pāṇa*), *vinādī* / *vinādikā*, *pāda*, and *nādī* / *nādikā* (or *nālikā*) are not listed by the PED in the sense of units of time. Some of the terms are found in non-Buddhist texts.⁴⁵

The study of Buddhist systems of measurements is complex, and we still have much to learn. I hope that further Buddhist sources, whether in Pāli, Sanskrit, Tibetan, or Chinese, will one day throw more light on the subject, in comparison with Jaina and Brahmanical systems.⁴⁶ The present article shows that, while Daśabalaśrīmītra followed the Vaibhāṣika system of measurement, he was aware that the Sthaviras defined the *yojana* differently.

⁴⁴ *Cakkavāladīpanī* 208.15–209.14.

⁴⁵ See Louis Renou & Jean Filliozat, *L'Inde classique, Manuel des études indiennes*, II, Hanoi, 1953, p. 735; Basham, *op. cit.*, 506.

⁴⁶ See, for example, the measurements listed by the 19th century Tibetan polymath Jamgön Kongtrul Lodrö Tayé (Koṅ sprul Blo gros mtha' yas, 1813–99), in *Myriad Worlds: Buddhist Cosmology in Abhidharma, Kālacakra, and Dzog-chen*, Ithaca, 1995, pp. 158–59 (time); 166–69 (space).

IV. “Analysis of Matter and Time”: Chapter 5 of the Samskṛtāsamkṛta-viniścaya

[1. The components of the atom]

Herein, the subtlest aggregation of matter (*sarvasūkṣmo hi rūpasamghātaḥ*) in the world of sentient beings and the receptacle world (*sattva-bhājana-loka*) is called the atom (*paramāṇu*). That beyond which nothing smaller can be known is the atom.

[1.1. The atom in the Sensual Realm (*kāmadhātu*)]

In the Sensual Realm (*kāmadhātu*), without sound and without faculty (*kāmadhātav aśabdako 'nindriyaḥ*), an eight-substance-atom arises (*aṣṭadravyaka utpadyate*). Therein, these are the eight substances (*aṣṭau dravyāṇi*): earth (*prthivī*), water (*ap*), fire (*tejas*), wind (*vāyu*), visible-form (*rūpa*), odour (*gandha*), taste (*rasa*), and touchables (*spraṣṭavya*). When sound is added to these, there is a nine-substance-atom (*navadravyaka*). The atom of the body-faculty (*kāyendriya*) comprises nine substances. Therein, the nine substances are the aforementioned eight substances and the body-faculty-substance. When endowed with sound, there is a ten-substance-atom (*daśadravyaka*). The atoms of the other faculties comprise ten substances. Therein, the ten substances are the aforementioned nine substances and the substance of each individual faculty. When endowed with sound, it becomes an eleven-substance-atom (*ekādaśadravyaka*).⁴⁷ This is taught:⁴⁸

⁴⁷ The Sanskrit given in parentheses up to this point is for the most part drawn from *Kośabhāṣya*, *Indriyanirdeśa*, pp. 52.24–53.8.

⁴⁸ The verse is *Kośakārikā* II,22 *kāme 'ṣṭadravyako 'sabdaḥ paramāṇur anindriyaḥ; kāyendriyī navadravyaḥ daśadravyo 'parendriyaḥ*. I cannot explain (and for now ignore) the double negatives of the Tibetan, which do not fit the prose or the *Kośa* verse.

In the Sensual [Realm] the atom has eight substances
without sound and without faculty.
With the body-faculty there are nine substances;
with the other faculties there are ten substances.

[1.2. The atom in the Form Realm (*rūpadhātu*)]

Because it is taught that in the Form Realm (*rūpadhātu*) there is neither scent nor taste, the atoms there are made up of six, seven, or eight substances respectively, according to the above-mentioned system: nothing more needs to be explained (*rūpadhātau gandharasayor abhāva uktas tena tatratyāḥ paramāṇavaḥ ṣaṣṭaptāṣṭadravyakā ity uktarūpatvāt na punar ucyante*).⁴⁹

[2. Measurements of size]

In this way, the form that is reached in order of decreasing size, is the atom (*rūpasya apaciṣyāmānasya paryantaḥ paramāṇuḥ*).⁵⁰ The first eleven categories of atom, etc., are [multiples of] seven, as follows:⁵¹

7 *paramāṇu* are 1 *aṇu* (*rdul phran* = Kośa)
Mvy *rdul phra mo*
7 *aṇu* are 1 *loha-rajās* (*lcags*)

⁴⁹ The Sanskrit given in parentheses is from *Kośabhāṣya*, *Indriyanirdeśa*, p. 53.17–18.

⁵⁰ The Sanskrit given in parentheses is from *Kośabhāṣya*, *Lokanirdeśa*, p. 176.11.

⁵¹ See *Kośabhāṣya*, *Lokanirdeśa*, 176.14–177.7, *ad Kośakārikā* III,85d–88a; Tibetan equivalents (“Kośa”) from *Kośabhāṣya* Tibetan, Q5591, Vol. 115, *mñon pa gu*, 177b6 foll.; Mvy § CCLI, nos. 8190–8206. See also La Vallée Poussin, *Cosmologie*, pp. 262–63. The list is given in English translation from the Tibetan at Jamgön Kongtrul, *op. cit.*, p. 168.

Mvy, Kośa *lcags rdul*⁵²
7 *loha-rajās* are 1 *śaśa-rajās* (*ri boṅ*)
Mvy, Kośa *ri boṅ rdul*
7 *śaśa-rajās* are 1 *eḍaka-rajās*⁵³ (*lug*)
Mvy, Kośa *lug rdul*
7 *eḍaka-rajās* are 1 *go-rajās* (*glaṅ*)
Mvy, Kośa *glaṅ rdul*
7 *go-rajās* are 1 *vātāyanacchidra-rajās* (*ñi zer*)
Mvy, Kośa *ñi zer* (*gyi*) *rdul*
7 *vātāyanacchidra-rajās* are 1 *rajās* (*rdul*)
Mvy, Kośa —
7 *rajās* are 1 *likṣā* (*sro ma*)
Mvy, Kośa *idem*
7 *likṣā* are 1 *yūka* (*śig*)⁵⁴
Mvy, Kośa *idem*
7 *yūka* are 1 *yava* (*nas*)
Mvy, Kośa *idem*
7 *yava* are 1 *aṅgulī-parvan* (*sor mo tshigs*)
Kośa *sor mo'i tshigs*,
Mvy *sor mo, sor*
3 *aṅgulī-parvan* are 1 *aṅgulī* (*mdzub mo*)
Kośa *sor mo*; Mvy —

⁵² *Kośabhāṣya* and Kongtrul add here 7 *loha-rajās* = 1 *ab-rajās* (Mvy 8193, Kośa *chu rdul*), 7 *ab-rajās* = 1 *śaśa-rajās*, not given by Daśabalaśrimitra.

⁵³ *avi-rajās*, Mvy 8195.

⁵⁴ Also described in the *Kośabhāṣya* as *tad-udbhava* = *de las byuṅ ba*: that is, the louse (*yūka*) comes from the louse-egg (*likṣā*).

As for surface measurements:⁵⁵

24 *aṅgulī* are 1 full *hasta* (*khru gaṇ* = Mvy)
Kośa khru
 4 *hasta* are 1 full *dhanu* (*gzu gaṇ* = *Kośa*)
*Mvy 'dom*⁵⁶
 500 *dhanu* are 1 *krośa* (*rgyaṇ grags*)
*Mvy, Kośa idem*⁵⁷
 8 *krośa* are 1 *yojana* (*dpag tshad*)
Mvy, Kośa idem.

According to the tradition (*āgama*) of the Ārya Sthavira *nikāya*, however:

500 *dhanu* are one *kosa*;
 4 *kosa* are one *gāvuta*;
 4 *gāvuta* are one *yojana*.

[3. Time (*kāla*)]⁵⁸

The limit of time (*kāla-paryanta*) is the moment (*kṣaṇa*).⁵⁹ A moment is described as the time it takes for one atom to pass to another

⁵⁵ *logs la gzal bas*: cf. *Kośabhāṣya* p. 176, ult *pārsvikṛtās tu*; *Kośabhāṣya* Tib. 178a2 *nos su bya na ni*.

⁵⁶ *Kośabhāṣya* 177.2 *dhanuḥ, vyāsenety arthaḥ* (*Kośabhāṣya* Tib. 178a2 *khru bži la gzu gaṇ no. 'dom gaṇ no zes bya ba'i tha tshig go*).

⁵⁷ This is the distance of an *araṇya*: *Kośakārikā* III, 87cd *krośo 'raṇyaṃ ca tan matam* (*Kośabhāṣya* Tib. 178a2 *rgyaṇ grags de la dgon par 'dod*).

⁵⁸ Cf. *Divyāvadāna* (*Śārdūlakarṇāvadāna*) p. 644; Hsüan-tsang in Beal I 71, Watters I 143–44; La Vallée Poussin, *Cosmologie*, p. 263; Jamgön Kongtrul, *op. cit.*, pp. 168–69. Mvy § CCLIII, *Dus kyi min*, gives a long list of terms related to time.

⁵⁹ *Kośabhāṣya* 176.11 *kālasya paryantaḥ kṣaṇo*.

atom.⁶⁰ Alternately, for a strong man to snap his fingers is 65 moments,⁶¹ or, some say, 37. 120 moments are called one *tatkṣaṇa*; 60 *tatkṣaṇa* are one *lava*; 30 *lava* are one *muhūrta*, which is also called a *nālikā*;⁶² 30 *muhūrta* are one day-and-night (*ahorātra*); 30 days are one month (*māsa*); 12 months are one year (*saṃvatsara*).⁶³

[4. Chapter colophon]

“Analysis of Matter and Time” (**Rūpa-kāla-viniścaya*), Chapter 5 of *The Analysis of the Conditioned and the Unconditioned*, compiled by Mahāpaṇḍita Daśabalaśrimitra.

V. Tibetan text of Chapter 5 of the *Samskṛtāsamkṛta-viniścaya*⁶⁴

[1] 'dir sems can dañ snod kyi 'jig rten dag gzugs 'dus pa thams cad kyi phra ba ni rdul phra rab ces (D: *zes Q*) brjod do// gaṇ las ches chuñ ba šes par bya ba med pa de ni rdul phra rab po//

[1.1] 'dod pa'i khams su sgra dañ bral ba dañ dbaṇ po spaṅs pa'i rdzas brgyad ldan skye bar 'gyur ro// de la rdzas brgyad ni 'di lta ste/ sa dañ/ chu dañ/ me dañ/ rluñ dañ/ gzugs dañ/ dri dañ/ ro dañ/ reg bya'o// 'di

⁶⁰ *Kośabhāṣya* 176.13, *yāvatā paramāṇoḥ paramāṇvantaram gacchati*.

⁶¹ *Kośabhāṣya* 176.13 *balavat puruṣacchaṭasamghātāmātreṇa pañcaśaṣṭhiḥ kṣaṇā atikrāmantīty ābhidhārmikāḥ*. For *puruṣacchaṭasamghātāmātreṇa* see Mvy 8226 and *L'Abhidharmakośa* III 178, n. 1.

⁶² The term is transliterated as *na-li-ka*.

⁶³ See *Kośabhāṣya* 177.7–20.

⁶⁴ Stobs bcu dpal bśes gñen, 'Dus byas dañ 'dus ma byas rnam par nes pa, Q5865, Vol. 146, *no mtshar bstan bcos ño*, 17b3–18a7; D3897, *dbu ma ha*, 119a6–120a2. All variants are recorded except for the use of the *śad* (*daṇḍa*), in which there are only two variants—the omission of the *śad* in Q after *dañ* in *dri dañ/ro dañ/*, as given by D.

mams su sgra rab tu bcug pas rdzas dgu ldan 'gyur ro// lus kyi dbaṅ po'i rdul phra rab ni rdzas dgu (D119b) ldan de/ de la rdzas dgu ni 'di lta ste/ rdzas brgyad po de ñid daṅ lus kyi dbaṅ po'i rdzas so// sgra daṅ bcas pa na rdzas bcu'o// dbaṅ po gzan mams kyi rdul phra rab ni rdzas bcu ldan no// de la rdzas bcu ni 'di lta ste/ rdzas dgu po de ñid daṅ dbaṅ po raṅ raṅ gi rdzas so// sgra daṅ bcas pa na rdzas bcu gcig tu 'gyur ro// gsuṅs te/

'dod na phra rab rdzas brgyad de (D: *æ* Q) // sgra med pa min
dbaṅ med min//
lus dbaṅ ldan la rdzas dgu'o// dbaṅ po gzan ldan rdzas bcu'o//⁶⁵

[1.2] 'dis ni gzugs kyi kham na dri daṅ ro dag med par gsuṅs pa des na/ de dag na ni rdul phra rab dag ni rim pa bzin du rdzas drug daṅ bdun brgyad do zes gsuṅs pa'i tshul ñid kyis na ci yaṅ brjod par mi bya'o//

[2] de ltar gzugs 'di ñid kyi 'grib bzin pa na mthar thug pa ni rdul phra rab po// rdul phra (Q18a) rab la sogs pa'i sgra bcu gcig ni/ goṅ ma bdun 'gyur te/ 'di lta ste/ rdul phra rab bdun la rdul phran no// rdul phran bdun la lcags so// lcags bdun la ri boṅ ño// ri boṅ bdun la lug go// lug bdun la glaṅ ño// glaṅ bdun la ñi zer ro// ñi zer bdun la rdul lo// rdul bdun la sro ma'o// sro ma bdun la sig go// sig bdun la nas so// nas bdun la sor mo'i tshigs so// sor mo'i tshigs gsum la mdzub mo'o// logs la gzal (D: *bzal* Q) bas/ sor mo ñi su bzi la khru gaṅ ño// khru bzi la gzu gaṅ ño// gzu lña brgya la rgyaṅ grags so// rgyaṅ grags brgyad (Q: *brgya* D) la dpag tshad do// 'phags pa gnas brtan pa'i sde pa'i luṅ las kyaṅ/

⁶⁵ Cp. *Kośakārikā* II,22 at *Kośabhāṣya* Tibetan 70b3 foll.:

'dod na dbaṅ po med pa daṅ//
sgra med phra rab rdul rdzas brgyad//
lus dbaṅ ldan la rdzas dgu'o//
dbaṅ po gzan ldan rdzas bcu'o//.

gzu 'dom lña brgya rgyaṅ grags te// rgyaṅ grags bzi la ba laṅ
'gros//
ba laṅ 'gros bzi dpag tshad do// zes so//

[3] dus kyi mtha' ni skad cig ma ste/ de yaṅ dus ci srid du rdul phra rab kyis rdul phra rab gzan brgal bar gyur pa de srid kyi dus la skad cig ces (D: *zes* Q) bya'o// yaṅ na stobs daṅ ldan pa'i skyes bus se gol gtogs pa tsam la skad cig ma drug cu rtsa lña'o// sum cu rtsa bdun zes pa yaṅ ño// skad cig brgya ñi su la de'i skad cig ces (D: *zes* Q) so// de'i skad cig drug cu la thaṅ cig (D: *gcig* Q) go// thaṅ cig (D: *gcig* Q) (D120a) sum cu la yud tsam mo// na-li-ka zes kyaṅ brjod do// yud tsam sum cu la ñin zag go// ñin zag (D: *zags* Q) sum cu la zla ba'o// zla ba bcu gñis la lo 'khor ba'o//

[4] paṇḍi-ta (D: *mkhas pa* Q) chen po stobs bcu dpal (Q adds *gyi*) bśes gñen kyis bsdu pa (D: *pa'i* Q) 'dus byas daṅ 'dus ma byas mam par ñes pa las gzugs daṅ dus mam par ñes pa zes bya ba l'eu lña pa'o//

Nandapurī

Peter Skilling

Abbreviations

D	Derge (sDe dge) bsTan 'gyur
<i>Kośabhāṣya</i>	P. Pradhan (ed.), <i>Abhidharmakośabhāṣyam of Vasubandhu</i> , 2nd rev. ed., Patna, 1975
Mm	Siamese script Mahāmakutaṛājavidyālaya (Bangkok) edition
MPS	Ernst Waldschmidt (ed.), <i>Das Mahāparinirvāṇasūtra</i> , 3 parts, [Berlin, 1950–51] Kyoto, 1986
Mvy	R. Sakaki, <i>Mahāvīyutpatti</i> , Kyoto, 1926
PTS	roman script Pali Text Society edition

- Q Peking (Qianlong) bKa' 'gyur and bsTan 'gyur
 Uv *Udānavarga*
 UvViv Michael Balk, *Prajñāvarman's Udānavargavivaraṇa*,
 2 vols., Bonn, 1984

Additions to the Burmese Manuscripts in the Library of Congress, Washington, D.C.

Dr Allen Thrasher of the Library of Congress called my attention to a few manuscripts that have come to (or back to) the Southeast Asia Section since I made the list published in JPTS XIII, pp. 1–31. This has made it possible to correct some entries and add new ones. There have also been a number of new palm-leaf manuscripts given to the library. Burmese-Pāli 129–153 were given by E. Gene Smith in 1993. They were bought in Thailand. Burmese-Pāli 158 and 159 were given by Mrs Mildred Goldthorpe. Burmese-Pāli 160 is an illustrated manuscript on paper recently acquired by the library.

William Pruitt

Abbreviations

- Barnett** L.C. Barnett, *A Catalogue of the Burmese Books in the British Museum* (London: British Museum, 1913).
Bode M.H. Bode, *The Pali Literature of Burma* (Royal Asiatic Society of Great Britain and Ireland, 1909, repr. 1966).
Bur MSS I Heinz Bechert, Daw Khin Khin Su, Daw Tin Tin Myint, compilers, *Burmese Manuscripts, Part 1* (Franz Steiner Verlag GMBH, 1979).
Bur MSS I Heinz Braun, Daw Tin Tin Myint, compilers, *Burmese Manuscripts, Part 2* (Franz Steiner Verlag GMBH, 1985).
PL K.R. Norman, *Pāli Literature* (Wiesbaden: Harrassowitz, 1983).